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Depth Scale Theory: The Role of Experiential Triangulation in Social Connection

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Abstract

Human emotional responses to others narratives vary considerably, yet existing models of empathy do not fully explain how individuals calibrate emotional intensity in real time. Depth Scale Theory (DST) proposes that empathy arises not as a direct simulation of another's experience, but through a subconscious comparative mechanism grounded in autobiographical memory. According to DST, narrative inputs function as retrieval cues that activate specific past experiences. The brain then engages in **Experiential Triangulation**, a rapid process that evaluates the thematic similarity, emotional vulnerability, and psychological capacity associated with the retrieved memory. This comparison produces an **Emotional Depth Score (EDS)**, which determines both the valence and the strength of the listener's empathic response. DST integrates concepts from Social Comparison Theory (Festinger, 1954), Schema Theory (Bartlett, 1932), and Simulation Theory (Goldman, 2006), but extends them by identifying the internal scaling mechanism that regulates empathy. The framework offers implications for clinical psychology, interpersonal communication, leadership, and digital behavioral dynamics. DST also outlines measurable parameters for future empirical validation, including difference-scaling methods and linguistic memory analysis. The theory contributes a structured model for understanding emotional variability and highlights the role of autobiographical memory in shaping social connection.

1. Introduction

Human emotional responses to external narratives such as stories of loss, success, or personal difficulty demonstrate significant variability. While two individuals may hear the same narrative, the resulting emotional reactions often diverge widely, ranging from deep resonant empathy to minimal or purely cognitive acknowledgment. Existing psychological frameworks partially explain this variation. Trait empathy and affective states have been shown to influence emotional reactivity (Decety & Jackson, 2004), and Schema Theory suggests that individuals interpret new information through pre-existing cognitive structures (Bartlett, 1932; Piaget, 1926). Narrative Transportation Theory further highlights how individuals become absorbed in stories (Green & Brock, 2000). However, these approaches do not sufficiently explain how emotional intensity is calibrated during interpersonal exchanges.

Depth Scale Theory (DST) proposes that empathy is not solely the result of simulation or schema activation but is fundamentally comparative. DST posits that when a listener encounters a narrative, the brain retrieves relevant autobiographical memories that serve as internal reference points. Through a rapid process termed **Experiential Triangulation**, the listener evaluates the relationship between the external narrative and their internal memory along three dimensions: thematic congruence, emotional vulnerability, and psychological capacity. This evaluation yields an **Emotional Depth Score (EDS)**, which represents the magnitude and nature of the listener's emotional response. By articulating the cognitive mechanism underlying affective calibration, DST offers a structured explanation for interpersonal variability and provides a foundation for empirical investigation into the dynamics of emotional connection.

2. Emotional Scaling

Before a listener can process a story, the narrator regulates its intensity. DST proposes that the emotional depth expressed in a narrative is regulated by the autobiographical memory system.

2.1 Core Memory Features

The intensity of the narrative input depends on three core memory features:

- **Vividness:** How clearly the memory is mentally reconstructed.
- **Emotional Valence:** The strength and tone of the original emotion.
- **Personal Significance:** How central the memory is to one's identity.

2.2 The Depth Scale

The narrator produces a signal that falls onto a five-level scale of emotional depth. This scale represents the "stimulus" that the listener will eventually triangulate:

Level	Depth of Emotional Intensity	Memory Basis
Level 1	Shallow / Detached narration	Weak, low meaning memory
Level 2	Light emotional tone	Generic memories
Level 3	Moderate–deep emotional presence	Vivid memories, moderate meaning
Level 4	High emotional intensity	Strong affective memories
Level 5	Saturated / overwhelming emotion	Deeply personal or traumatic memory

As shown in Table 1, higher levels reflect stronger autobiographical memory activation.

3. Experiential Triangulation

Experiential Triangulation is the central cognitive mechanism of DST that determines the quality of social connection a listener forms. It is the process by which we use our past reality to measure and calibrate the emotional weight of another person's present experience.

3.1 The Process

When a listener receives a narrative input, the brain executes a rapid, subconscious comparison against relevant, specific memories retrieved from their own Autobiographical Memory (AM). The brain assesses this relationship across two critical dimensions:

A. Thematic Congruence

- **The Query:** Does the story category (e.g., loss, conflict, success) match a category already deeply mapped in the listener's AM?
- **The Effect:** High congruence ensures the narrative acts as an effective Retrieval Cue. Without it, the process stalls, resulting in detachment.

B. Emotional Vulnerability Index ("The Depth Well")

- **The Query:** How resolved or unresolved is the retrieved memory right now?
- **The Effect:** This creates a "Curvature of Trauma."
  - *Rigid Curvature:* Individuals with unresolved trauma possess a "tight" curvature. A minor narrative "stone" hitting this memory triggers a disproportionately high response.
  - *Flexible Curvature:* Individuals with high emotional regulation possess a "wide" curvature, allowing for depth without becoming overwhelmed.

4. Emotional Depth Score (EDS)

The triangulation process generates an **Emotional Depth Score (EDS)**. This internal metric dictates the valence and amplitude of the empathy response.

The EDS is calculated as a ratio between the **Emotional Resonance (ER)** triggered by the narrative and the listener's **Resilience Capacity (RC)**:

$$EDS = \frac{\text{Emotional Resonance } (E_R)}{\text{Resilience Capacity } (R_C)}$$

The Emotional Depth Score (EDS), an empirical metric derived from Experiential Triangulation, assesses the functional ratio of a narrative's Emotional Resonance (ER) (stimulus amplitude) against the listener's Resilience Capacity (RC) (psychological regulatory bandwidth).

4.1 Effect on Social Connection

The resulting EDS directly dictates the type of connection formed between narrator and listener:

Triangulation Result (EDS)	Emotional Response	Effect on Social Connection
High EDS	Affective Empathy (Feeling with)	Deepest validation, trust, and connection.
Low EDS	Cognitive Empathy (Understanding logically)	Detachment, analytical advice often perceived as invalidating
Volatile EDS	Egocentric Bias / Relatability Trap	Connection failure; listener shifts focus to their own trauma

It illustrates how the functional ratio of Emotional Resonance (ER) (the narrative stimulus amplitude) to Resilience Capacity (RC) (the psychological regulatory bandwidth) modulates the specific type of empathic response.

4.2 The Relatability Trap

DST identifies a specific failure mode called the **Relatability Trap**. When EDS is excessively high due to a match with unresolved internal trauma, the listener's focus shifts entirely from the speaker to the self. This manifests as "conversational hijacking," where the listener interrupts to share their own story, mistaking their self-referential processing for empathy.

5. Theoretical Background and Differentiation

DST builds upon three foundational domains but addresses their limitations:

1. **Schema Theory:** (Bartlett, 1932; Piaget, 1926) While Schema Theory explains how information is categorized, it lacks a mechanism for emotional quantification. DST provides this missing scaling mechanism.

2. **Social Comparison Theory:** (Festinger, 1954) DST adopts Festinger's comparison mechanism but alters the objective. The comparison is not for status (upward/downward) but for **affective calibration** measuring the severity of the event against the internal memory bank.
3. **Simulation Theory:** (Goldman, 2006) Simulation theory implies we simulate others to understand them, but fails to explain the **scaling** of that simulation. DST posits that simulation is constrained by the availability and intensity of the listener's own analogous memories.

6. Applications and Implications

6.1 Clinical Psychology: Addressing "Experiential Distance"

DST provides a framework for analyzing "Experiential Distance" the perceived gap between a client's reality and their support system's understanding.

- **Intervention:** Therapists can use **Rhetorical Vulnerability** techniques, coaching clients to use sensory-specific language to better trigger the listener's AM, thereby artificially increasing the EDS and facilitating connection.

6.2 Organizational Leadership

Leaders often misinterpret a lack of emotional response as apathy. DST suggests this is often a failure of Experiential Triangulation (a lack of historical comparators).

- **Application:** Leaders must construct "Depth Profiles" of their teams. If a team member has low EDS regarding a crisis, the leader should shift communication strategies from emotional appeals to logical framing.

6.3 Digital Dynamics and Polarization

Social media algorithms prioritize content that triggers immediate, high-amplitude EDS (outrage, fear). DST explains that this structurally suppresses nuanced narratives (which generate low EDS), fostering an environment where emotional resonance supersedes cognitive evaluation.

6.4 Artificial Intelligence and Robotics

DST offers a diagnostic model for the current limitations of synthetic emotional intelligence and human-robot interaction.

- **The Autobiographical Gap:** Since AI and robotics inherently lack a "lived reality" or **Autobiographical Memory (AM)**, they cannot perform genuine **Experiential**

Triangulation. They default to processing narrative inputs with a perpetually near-zero **Emotional Resonance (ER)** component.

- **Implication for Empathy Simulation:** Conversational agents (LLMs) and social robots can only achieve **Cognitive Empathy (Low EDS)**, simulating understanding without *feeling with*. Their response is based entirely on logical schema retrieval rather than the emotional weighing of personal experience.
- **Design Solution:** To advance empathetic AI, DST proposes developing an **Analogous Memory Bank (AMB)** or **Synthetic Vulnerability Index** to model a pseudo-Resilience Capacity. This mechanism would allow the AI to *simulate* the RC/ER comparison, artificially modulating its **Emotional Depth Score** output to deliver a response that is contextually sensitive to human vulnerability, rather than merely semantically correct.

7. Proposed Validation and Conclusion

To validate this theoretical model, future research will utilize **Nonmetric Probabilistic Difference Scaling** to map the "distance" of emotional intensity between narrative pairs and personal memories. Additionally, **Linguistic Memory Analysis** will correlate the specificity of retrieved memories with reported empathy levels.

Conclusion

Depth Scale Theory offers a structured explanation for the variability of human connection. By positing that we measure others' pain against the ruler of our own reality, DST moves empathy from a mystical virtue to a cognitive process. Understanding the Emotional Depth Score allows us to navigate the experiential distance between individuals, transforming our approach to therapy, leadership, and human understanding.

Note: This work is a conceptual framework. The mechanisms described are theoretical proposals requiring structured empirical investigation.

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